

01 07 261720Z FEB 83 PP

HQ ADCOM PETERSON AFB CO//JB//

JOHNSON SPACE CENTER HOUSTON TX//CODE PA//

PERSONAL FROM MGEN B.K. BROWN TO MR. R.G. ROSE

SUBJECT: ADCOM SUPPORT TO SHUTTLE

1. YOU ARE AWARE THAT OUR STAFFS HAVE WORKED CLOSELY FOR MANY MONTHS TO ASSURE ADCOM RESPONSE TO NASA'S STATED SHUTTLE SUPPORT REQUIREMENTS, WHICH INCLUDE EARLY ORBIT DETERMINATION (EODET), CONJUNCTION DATA (COMBO) AND TRACKING AND IMPACT PREDICTION (TIP) FOR THE EXTERNAL TANK. ADDITIONALLY, THE ADCOM STAFF HAS TRIED TO IDENTIFY THOSE THINGS WE MIGHT DO TO PREPARE TO ASSIST NASA IN THE EVENT OF CONTINGENCIES, SUCH AS ANOMALIES OCCURRING IN INJECTION OR MANEUVER BURNS, ET REENTRY, OR ORBITER RECOVERY. IT HAS BEEN OUR OBJECTIVE TO BE ABLE TO SUPPORT YOU FULL UP SHOULD YOU REQUEST IT WHILE AT THE SAME TIME BEING CAREFUL NOT TO GET UNDERFOOT. OUR PLANS WERE BRIEFED TO THE COMMANDER-IN-CHIEF, LT GEN MARTINEZ, ON 27 FEBRUARY AND HE REEMPHASIZED THE ABOVE OBJECTIVE. IN DOING SO, HE RAISED THE ISSUE OF ADCOM'S RADAR TRACKING OF THE SHUTTLE VEHICLE AND POSSIBLE RESULTING RFI TO THE SHUTTLE'S ON-BOARD SYSTEMS; HE DIRECTED THE STAFF CLARIFY THIS ISSUE WITH NASA SOONEST.

LT COL J.B. WILDE, J32/3305
26 FEB 83/ARG 61 001 973 92

J.B. WILDE, LT COL, DIR J32/3305

J.B. Wilde

8. OUR PRESENT PLANS CALL FOR THE RADAR SENSORS (DESCRIBED IN PARAGRAPHS 5 AND 6 BELOW) TO TRACK THE SHUTTLE ON EVERY TRACKING OPPORTUNITY DURING ITS FLIGHT; THEIR LOCATIONS, FREQUENCIES, POWER OUTPUTS AND APPROXIMATE CUMULATIVE TRACKING TIME DURING THE 36 REV PROFILES ARE SHOWN. THESE SENSORS GROUP INTO TWO CATEGORIES: FOUR PERFORMING ADCOM'S MISSILE WARNING FUNCTIONS, PAVE PAWS EAST AND WEST, EGLIN PPS-65 AND THE MACDILL FSS-71 AND THE NINE OTHER SPADATS SENSORS. AT THE MISSILE WARNING SITES WE COULD MINIMIZE TRACKING OF THE SHUTTLE GIVEN ACCURATE EPHEMERIDES ON THE ORBITER, BUT WE COULD NOT SHUT DOWN THE SITES WITHOUT DOD DIRECTION. THE SPADATS SITES, ON THE OTHER HAND, COULD BE DIRECTED TO SHUT DOWN OR ALTER TRACKING AS REQUIRED TO PROTECT THE SHUTTLE, SHOULD THAT BE NECESSARY.

9. THE PRICE TO BE PAID FOR RESTRICTING RADIATION BY ADCOM RADARS IS TWOFOLD: (1) IN THE QUALITY OF SUPPORT PROVIDED IN THOSE AREAS SPECIFICALLY REQUESTED BY NASA (CODET, CONBO, TIP) AND (2) IN OUR ABILITY TO MAINTAIN UP-TO-THE-MINUTE CRITICAL INFORMATION TO RESPOND QUICKLY TO CONTINGENCIES.

A. WITH RESPECT TO THE FIRST (CODET, CONBO, TIP), I WOULD NOT RECOMMEND RESTRICTING THE ADCOM SENSORS WITHOUT A FULL UNDERSTANDING ON YOUR PART OF THE IMPLICATIONS OF THE POSSIBLE SUPPORT

DEGRADATIONS THAT MIGHT OCCUR DURING THE CRITICAL FIRST REV OR FROM LAUNCH THROUGH ET REENTRY.

B. WITH RESPECT TO THE SECOND AREA (CONTINGENCY PLANNING), HOWEVER, LIMITATIONS REQUIRED PROBABLY COULD BE APPLIED TO THE ADCOM RADARS WITH LESS CONCERN.

4. YOUR ASSESSMENT AT THE EARLIEST OPPORTUNITY SHOULD ENABLE US TO GET UNDER WAY PROMPTLY WITH ANY NECESSARY REPLANNING OF OUR SUPPORT. MY INSTRUCTIONS FROM THE CINC IN THIS REGARD ARE TO PROVIDE 100 PERCENT OF THE SUPPORT YOU HAVE REQUESTED, BUT NOT TO DO ANYTHING ELSE THAT MIGHT HAVE EVEN ONE-HALF OF ONE PERCENT POSSIBILITY OF INTERFERING IN ANY WAY WITH THE SHUTTLE OPERATION. I WOULD HOPE THAT NOTHING WE HAVE PLANNED WOULD FALL INTO THE LATTER CATEGORY; BUT IF SOMETHING DOES, WE NEED TO KNOW SO THAT WE CAN CHANGE OUR SUPPORT PLAN ACCORDINGLY.

5. RADAR SENSOR RADIO FREQUENCY DATA:

RADAR	BAND	FREQUENCY	REMARKS	COORDS LAT/LONG
PAVE PAWS	UHF	420-450MHZ	21	41/70W
AN/FPS-115				

PHASED ARRAY.

DIRECTED EASTERLY.

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031 260830

PAVE PAES UHF 420-450MHZ

(AM/FPS-132)

BEALE AFB, CA

PHASED ARRAY.

DIRECTED WESTERLY.

AM/FPS-65 UHF 437-450MHZ

EGLEW AFB, FL

PHASED ARRAY.

DIRECTED SOUTHERLY.

AM/FPS-7 C 5400-5700

MACDILL AFB, FL

MHZ

LOWER ELEVATIONS

RADIATED.

AM/FPS-79 UHF 432MHZ

LARGE DISH TRACKER.

TURKEY

ALCOR C 3.664-3.672

LARGE DISH TRACKER.

ROI HARMER ISLAND.

KHAJALEIN

ALTAIR UHF 419MHZ

LARGE DISH TRACKER.

0000

ROI NAMUR ISLAND, VHF 155.5MHZ

KHAJALEIN

MILLSTONE HILL UHF 430MHZ LARGE DISH TRACKER. 42/71W

GROTON, MA L 1295MHZ

MAYSTACK H 307MHZ LARGE DISH TRACKER. 42/71W

GROTON, MA

~~GREENPASTURE~~ VHF 216.98MHZ VERTICAL FAN: CB 33/70-128W
 ELMGREN, VA INTERFEROMETER.

(COMPUTER CENTER)

AM/FPQ-14 C 5400-5900 LARGE DISH TRACKER. 17/61W

ANTIGUA ISLAND MHZ

AM/FPQ-14 C 5400-5900 LARGE DISH TRACKER. 17/61W

KAENA POINT, HI MHZ

AM/FPQ-15 C 5450-5900 LARGE DISH TRACKER. -7/14W

ASCENSION ISLAND MHZ

L. RADAR SENSOR TRANSMITTER POWER: CUM TRK TIME (MIN)

RADAR	PEAK	TRACE	COMMENT
PAVE PARS	600	61	PER FACE.
OTIS			TWO FACES. 56.8
BEALE			TWO FACES. 53.5

J3Z

AN/PSS-85	b1	b1	ONE PAGE.	21.5
EGLIN, FL				
AN/PSS-7	b1	b1	PER TRANSMIT-	6.9
MACDILL AFB, FL			TERS TWO TRANS-	
			MITTERS OUT POWER	
			NOT ADDITIVE .	
AN/PSS-79	b1	b1		56.5
TURKEY				
ALCOR	b1	b1		64.8
KWAJALEIN				
ALTAIR	b1	b1		68.3
KWAJALEIN				
HILLSTONE HILL	b1	b1		93.5
GROTON, MA				
HAYSTACK	b1	b1		93.5
GROTON, MA				
NAVSPASUR	b1	b1	AT EACH	0.3
LAKE KICKAPOO, TX			TRANSMITTER	
			LOCATION LISTED.	

Handwritten signature/initials

GILA RIVER, AZ

JORDAN LAKE, HI

AN/PPG-14 b1 b1 75.6

ANTIGUA

PPG-14 b1 b1 76.6

KAENA POINT, HI

AN/PPG-15 b1 b1 66.5

ASCENSION ISLAND

7. NY PROJECT OFFICERS FOR THIS MATTER ARE LT COL BOB GIFFEN,
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